

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WLW/P40313ANS.WO	FOR FURTHER ACTION	
		See Form PCT/PEA/416
International application No. PCT/GB2005/000187	International filing date (day/month/year) 20.01.2005	Priority date (day/month/year) 20.01.2004
International Patent Classification (IPC) or national classification and IPC INV. A01B45/04		
Applicant WARKE, WILLIAM LYLE		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 5 sheets, as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input checked="" type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 21.11.2005	Date of completion of this report 06.06.2006
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Schlichting, N Telephone No. +49 89 2399-2428

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on

 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3(a) and 23.1(b))
 - publication of the international application (under Rule 12.4(a))
 - international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-32 filed with telefax on 21.11.2005

Drawings, Sheets

1/32-32/32 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:

 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superceded."

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Box No. IV Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has, within the applicable time limit:
 - restricted the claims.
 - paid additional fees.
 - paid additional fees under protest and, where applicable, the protest fee.
 - paid additional fees under protest but the applicable protest fee was not paid.
 - neither restricted the claims nor paid additional fees.
2. This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
 - complied with.
 - not complied with for the following reasons:

see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
 - all parts.
 - the parts relating to claims Nos. .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims 16-19
	No:	Claims 1-15,20-32
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-32
Industrial applicability (IA)	Yes:	Claims 1-32
	No:	Claims

2. Citations and explanations (Rule 70.7):

see separate sheet

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

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Re Item IV

1. This Authority considers that there are 2 inventions covered by the claims indicated as follows:
 - I: Claims 1 to 25 directed to an apparatus for cutting turf, for soil de-compacting and for soil drainage comprising a tool which leading portion of said tool is disposed substantially vertically below an axis of rotation of at least one axle of the ground engaging means
 - II: Claims 26 to 31 directed to an apparatus for soil drainage and irrigation comprising a trench generating means
2. The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:

Examining the possible correspondence by technical effect, one finds that the technical effect as well as the objective problem of the first invention is that the sods of turf cut will have a consistent thickness or pipes laid will be at a regular depth below surface and that the technical effect and the corresponding objective problem of the second invention is to generate a trench in the soil.

This appears to show lack of corresponding technical effect. Consequently, neither the objective problem underlying the subjects of the claimed inventions, nor their solutions defined by the special technical features allow for a relationship to be established between the said inventions, which involves a single general inventive concept.

3. In conclusion, the groups of claims are not linked by common or corresponding special technical features and define 2 different inventions not linked by a single general inventive concept.

The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

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Re Item V

1. Reference is made to the following documents:

D1: GB-A-2 379 150
D2: US-A-5 690 178
D3: US-A-5 009 270
D4: US-A-2 942 674

2. Claims 1 to 25

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document) an apparatus for cutting turf, for soil de-compacting and for soil drainage and irrigation (p. 1, l. 4-7), the apparatus comprising a chassis (10) having ground engaging means (74, 76), an adjustable working arm (18, 20) having a chassis-engaging end movably mounted on the chassis (p. 5, l. 3-4) and a tool-engaging end having means for receiving a tool (p. 5, l. 4-5), means for oscillating the tool-engaging end of the adjustable working arm (p. 5, l. 6-9) wherein the oscillating means comprises a drive means mounted on the chassis and a connecting means mounted intermediate the drive means and the adjustable working arm (p. 5, l. 6-9).

D1 further describes at least one axle (see figures 2A and 4) of the ground engaging means having wheel means (74, 76) mounted thereon. The apparatus of D1 also comprises a leading portion of a tool (see figure 2A) mounted on the tool receiving means (p. 5, l. 4-5) which is disposed substantially vertically below an axis of rotation of the axle (axle of wheel 76, see figure 2A).

The subject-matter of claim 1 therefore is not new (Article 33(2) PCT).

Also D2 describes a similar apparatus with the same features and therefore, the subject-matter of claim 1 is also not new over D2.

- 2.2 The dependent claims 2 to 25 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1 and D4 and the corresponding passages cited in the search report.

3. Claims 26 to 31

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 26 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document) an apparatus for cutting turf, for soil de-compacting and for soil drainage and irrigation (p. 1, l. 4-7), the apparatus comprising a chassis (10) having ground engaging means (74, 76), an adjustable working arm (18, 20) having a chassis-engaging end movably mounted on the chassis (p. 5, l. 3-4) and a tool-engaging end having means for receiving a tool (p. 5, l. 4-5), means for oscillating the tool-engaging end of the adjustable working arm (p. 5, l. 6-9) wherein the oscillating means comprises a drive means mounted on the chassis and a connecting means mounted intermediate the drive means and the adjustable working arm (p. 5, l. 6-9).

Furthermore, D1 also shows a trench generating means (p. 9; l. 23-24), mounted on the tool receiving means of the adjustable working arm (see figure 10), said trench generating means comprising a wedge blade (12') having a leading edge blade (see figures 9 and 10) and a trailing edge having means for receiving material (as mentioned on p. 10, l. 1-3: ... designed to cut a deep narrow trench, **when the earth is removed...**, this necessarily needs means for receiving the material which cut by the leading edge blade).

The subject-matter of claim 26 therefore is not new (Article 33(2) PCT).

- 3.2 Dependent claims 27 to 31 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1 and D4 and the corresponding passages cited in the search report.

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4. The requirements of Article 33(4) PCT concerning industrial applicability are fulfilled by claims 1 to 31.

Re Item VII

1. Independent claim 1 and 26 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
2. Claim 32 contains a reference to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1 is not mentioned in the description, nor is this document identified therein.